

CLAIMS

1. A user equipment (UE), comprising:
 - a processor; and
 - a transceiver coupled to the processor,wherein the processor is configured to:
 - trigger reporting of a delay status report (DSR); and
 - transmit, via the transceiver to a base station, the DSR indicating delay status for a first set of logical channel groups (LCGs), the first set of LCGs comprising one or more LCGs,wherein each of the LCGs in the first set has a respective DSR available for transmission; or
 - wherein each of the LCGs in the first set is configured with reporting of a respective DSR and has data available for transmission; or
 - wherein each of the LCGs in the first set has data available for transmission.
2. The UE of claim 1, wherein the DSR comprises a first field comprising a first bitmap, and each of bits in the first bitmap is associated with one of LCGs and each of at least one of the bits indicates at least one of the following:
 - whether a respective one of the LCGs has data available for transmission, or
 - whether reporting of a respective DSR for the respective one of the LCGs is triggered, or
 - whether a third field for the respective one of the LCGs is present in the DSR, the third field indicates a data volume of a set of data available for transmission in the respective one of the LCGs,wherein the LCGs are configured for the UE or configured with allowed reporting of DSRs.
3. The UE of claim 1, wherein the DSR comprises a second field comprising a second bitmap, each of bits in the second bitmap is associated with one of LCGs and each of at least one of the bits indicates whether reporting of a respective DSR for a respective one of the LCGs is triggered.

4. The UE of claim 1 or 2, wherein the DSR comprises a third field, and the third field indicates one of the following:

a first data volume of a first set of data available for transmission in a respective one of the LCGs, remaining time of data in the first set of data being below a first remaining time threshold for the respective one of the LCGs,

a second data volume of a second set of data available for transmission in the respective one of the LCGs, remaining time of data in the second set is below the first remaining time threshold and is the shortest among remaining time of data available for transmission in the one of the LCGs,

a third volume of data available for transmission in the respective one of the LCGs, a respective DSR is not triggered or reporting of the respective DSR is not configured for the respective one of the LCGs, or

a fourth data volume of a third set of data available for transmission in the respective one of the LCGs, remaining time of data in the third set of data is the shortest among remaining time of data available for transmission in the respective one of the LCGs, a respective DSR is not triggered or reporting of the respective DSR is not configured for the respective one of the LCGs.

5. The UE of claim 1, wherein the processor is further configured to:

based on determining that the reporting of the DSR is triggered and reporting of a buffer status report (BSR) is triggered, transmit at least one of the DSR and the BSR in a decreasing order of priorities of the DSR and the BSR.

6. The UE of claim 5, wherein the processor is further configured to:

determine a first priority of the DSR as a first highest priority of logical channels (LCHs) with delay status available for transmission in the first set of LCGs with delay status available for transmission; and

determine a second priority of the BSR as a second highest priority of LCHs with data available for transmission in a second set of LCGs with data available for transmission, the second set of LCGs comprising one or more LCGs.

7. The UE of claim 5, wherein the processor is further configured to:

determine the priorities of the DSR and the BSR based on types of the DSR and the BSR.

8. The UE of any preceding claim, wherein the processor is configured to perform at least one of:

if a data volume of one of said one or more LCGs with DSR triggered is zero, not reporting the DSR for said one of said one or more ICGs, and

if a remaining time of one of said one or more ICGs with DSR triggered is zero, not reporting the DSR for said one of said one or more ICGs.

9. A base station, comprising:

a processor; and

a transceiver coupled to the processor,

wherein the processor is configured to:

transmit a configuration of a delay status report (DSR) via the transceiver to a user equipment (UE); and

receive, via the transceiver from the UE, the DSR indicating delay status for a first set of logical channel groups (LCGs), the first set of LCGs comprising one or more LCGs,

wherein each of the LCGs in the first set has a respective DSR available for transmission, or

wherein each of the LCGs in the first set is configured with reporting of a respective DSR and has data available for transmission, or

wherein each of the LCGs in the first set has data available for transmission.

10. A processor for wireless communication, comprising:

at least one memory; and

a controller coupled with the at least one memory and configured to cause the controller to:

trigger reporting of a delay status report (DSR); and

transmit, to a base station, the DSR indicating delay status for a first set of logical channel groups (LCGs), the first set of LCGs comprising one or more LCGs,

wherein each of the LCGs in the first set has a respective DSR available for transmission, or

wherein each of the LCGs in the first set is configured with reporting of a respective DSR and has data available for transmission, or

wherein each of the LCGs in the first set has data available for transmission.

11. A method for wireless communication, comprising:

triggering, at a user equipment (UE), reporting of a delay status report (DSR); and
transmitting, to a base station, the DSR indicating delay status for a first set of logical channel groups (LCGs), the first set of LCGs comprising one or more LCGs,

wherein each of the LCGs in the first set has a respective DSR available for transmission, or

wherein each of the LCGs in the first set is configured with reporting of a respective DSR and has data available for transmission, or

wherein each of the LCGs in the first set has data available for transmission.